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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,992	04/12/2005	Yoshiyuki Udagawa	258513US0PCT	1958
22850	7590	02/27/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
WYROZEDSKI LEE, KATARZYNA I				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
02/27/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

# Office Action Summary

Application No.

10/506,992

Applicant(s)

UDAGAWA ET AL.

Examiner

Katarzyna Wyrozebski

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-949)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

In view of applicant's request for continued prosecution, following office action is rendered non-final. Applicants' arguments have been considered and will be addressed below.

Applicants amended claims to include process limitation of adding inorganic compound with carboxyl compound instead of carbonyl compound, which dispersion is added to the liquid rubber.

Per claim interpretation the simplest formula of the compound that can be oxide or hydroxide of Al, Mg, Ti, Ca. This inorganic compound along with compound containing carboxylic functionality is added to the liquid rubber. Based on applicants examples, the term "liquid rubber" is viewed emulsion, since inorganic particle dispersion is added to rubber emulsion, wherein rubber itself does not necessarily have to be in liquid form.

#### *Double Patenting Rejection*

Double Patenting rejection over application 10/129,330 is hereby maintained for following reason.

The co-pending application discloses process, where dispersion of inorganic filler is added to rubber dispersion. The inorganic filler of '330 satisfies requirements of the filler required by the instant invention. Although co-pending invention '330 is silent with respect to the addition of carboxyl compound, the examiner is able to utilize specification to obtain the meaning of dispersion. Based on the examples, the inorganic filler is added to the rubber along with oil and stearic acid. Stearic acid contains carboxyl group. Since applicant's independent

claim does not define carboxyl containing compounds, stearic acid meets the claim. Stearic acid is functional equivalent of cited in claim 4 fatty acid salt.

In view of the above discussion Double Patenting rejection of claims 1, 2, 5-11, 13-19 over 10/129,330 is hereby re-stated.

Further re-evaluation of the US 6,727,307 - the published invention has basically the same disclosure, comprising polar rubber and inorganic compound of the instant invention. Inorganic compound is also in a dispersion presenting the same components as those utilized in the teachings of '330, therefore Double patenting rejection of claims 1, 2, 5-11, 13-19 is hereby re-stated for the same reasons as Application 10/129,330.

*Claim Rejections - 35 USC § 102*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 2, 5-10 are rejected under 35 U.S.C. 102(a) as being anticipated by KONDO (US 6,727,307).

The discussion of the disclosure of KINDO from paragraph 5 of the office action dated 1/22/08 is incorporated here by reference. Please note Table 3 in col. 16, which discloses adding stearic acid along with inorganic filler dispersion. Explanation above Table 3, clearly indicates that the components were added together.

3. Claims 1, 2, 5-11, 13-19 are rejected under 35 U.S.C. 102(e) as being anticipated by KONNO (US 2004/0030027)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The discussion of the disclosure of the teachings of KONNO from paragraph 6 of the office action dated 1/22/08 is incorporated here by reference. In teachings of KONNO applicants are requested to turn to Table 20 [00174] teaching of stearic acid, wherein stearic acid comprises carboxyl group. Paragraph [00174] clearly indicates that the components are added together.

4. Claims 1, 2, 5-11, 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by KONNO (EP 1,219,676).

The disclosure of KONNO is european equivalent of US 2004/0030027, however it is applied under the statues of 102(b). The table disclosing addition of inorganic dispersion along with stearic acid and aromatic oil is disclosed on page 13 of the European document.

*Claim Rejections - 35 USC § 103*

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, 4-11, 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over GORL (US 6,882,036) in view of KONDO (EP 1,219,676) and evidenciary teachings of THIBON (US 1,656,250).

The discussion of the disclosure and the prior art of GORL with evidenciary teachings of THIBON as disclosed in paragraph 11 of the office action dated 1/22/08 is incorporated here by reference.

The examiner would like to draw applicant's attention to col. 6 of GORL, where it is clearly indicated that rubber emulsion or solution is mixed with filler suspension (lines 45-47). Such addition is also evidenced in the example I of GORL.

The difference between GORL and the instant invention is in the surfactant utilized to form filler suspension. The prior art of GORL teaches use of alcohols such MARLIPAL, which is an alcohol (polyethylene glycol ether).

With respect to the above difference, the prior art of KONDO discloses surfactants suitable for use in rubber emulsions. These surfactants are listed in [0049], wherein emulsifier and surfactant mean the same. The surfactants or emulsifiers of KONDO are the same type as those required by the instant invention.

In the light of the above disclosure it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize surfactants or emulsifiers of KONDO to form suspension of GORL and thereby obtain the claimed invention.

The emulsifiers of KONDO are also known as surfactants. They contain both hydrophilic and hydrophobic components and are therefore capable of forming suspension or emulsion. Such modified process will also provide rubber comprising inorganic filler of the instant invention.

*Response to the Applicant's Arguments:*

In their response dated 12/15/08 the applicants argued following:

a) The prior art of record does not teach the addition step of the instant invention.

Suggestion - incorporating limitation of claim 4 into claim 1 would obviate the rejection. At this point in time, anticipation rejections as well as Double Patenting rejections do not reject claim 4. Examiner is relying on stearic acid in Tables as a source of carboxyl group. At this point in time stearic acid reads on instant claims and it is added to the rubber together with inorganic compounds, wherein inorganic compounds are in dispersion. Therefore all other compounds added to rubber together with inorganic filler will also be in the same dispersion.

b) The prior art of record does not teach required pH, specifically the instant invention discloses range of 5.1 -8.4.

With respect to the above argument, yes, the paragraph [0069] disclosed by the applicants is one of the few paragraphs that teaches pH ranges. However the prior art of KONNO further discloses in [0074] that the filler can be flocculated utilizing flocculating polymer, wherein flocculation of the filler is not excluded by the instant invention. Flocculation will affect the pH of the composition to reduce inorganic salt. The pH is provided in range of 3-6 such that the rubber can be coagulated.

With respect to the prior art of GORL – the teaching in col. 5, lines 25-28 clearly teaches

The pH of the emulsion or solution, as is the pH of the 25  
filler suspension after admixing the emulsion, is in the  
weakly acid or weakly alkaline region, but is preferably  
about 7.

That is if according to the col. 3, the pH of the latex is in a range of 4-7, then the addition of the inorganic suspension to keep the pH of latex at 7, would also have to be 7 or higher (for rubber emulsion having pH of 7).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 8:30 AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katarzyna Wyrozebski/  
Primary Examiner, Art Unit 1796  
February 20, 2009